

Notice of Allowability

Application No.

10/090,786

Applicant(s)

KIMURA, JUNICHI

Examiner

Thanh Y. Tran

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/2/04.
2. ☒ The allowed claim(s) is/are 21-32 and 34-43.
3. ☒ The drawings filed on 02 June 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 7/8/04.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 21-32 and 34-43 are allowed.

2. The following is a statement of reasons for the indication of allowable subject matter:

claim 21 recites, inter alia, "a module comprising an electrode in the recess, the electrode is spaced from the lateral side such that no portion of the electrode is co-planar with the surface", in combination with other claimed features.

claim 34 recites, inter alia, "a method comprising removing the decomposed exposed regions of the resist so as to expose the part of the metal plated portion on the interior surface of the hole over which the exposed portions of the resist were positioned; and removing the exposed part of the metal plated portion from the interior surface of the hole", in combination with other claimed features.

claim 39 recites, inter alia, "a method comprising removing the uncured regions of the resist so as to expose the part of the metal plated portion on the interior surface of the hole over which the covered portions of the resist were positioned; and removing the exposed part of the metal plated portion from the interior surface of the hole", in combination with other claimed features.

3. The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

4. Okada et al (U.S. 6,534,726) discloses in figures 1 and 2 a module substrate (11) comprising an electrode (solder 17) in the recess (hole 13), the electrode is spaced from the

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lateral side, however, the portion of the electrode is co-planar with the lateral surface of the substrate.

5. Okada et al (U.S. 6,571,469) discloses in figures 1-3 a module substrate (100) wherein the outer edge of electrode (solder 108) are not co-planar with the lateral surface. Nevertheless, the claim states that NO PORTION is co-planar. As seen in figure 11 of the instant invention, the electrode is set back from the lateral surface of the substrate. So, no part of the electrode lies in the same surface as the lateral surface. With Okada et al the central part of the electrode (108) lies in the same planar (same plane) with the lateral surface because the electrode projects beyond the lateral surface. As such Okada does not meet the limitation that NO PORTION is co-planar.

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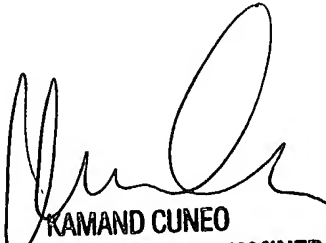
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo, can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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